



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

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February 26, 2016

Cathy C. Taylor
Director, Environmental Services
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060

RE: Chesterfield Power Station Upper (East) Ash Pond (SWP 619) Groundwater
Monitoring Plan Submittal Review

Dear Ms Taylor:

The Virginia Department of Environmental Quality (DEQ) has reviewed the groundwater monitoring plan for the Upper (East) Ash Pond provided by Dominion in accordance with the applicable provisions of the Virginia Solid Waste Management Regulations (VSWMR) which incorporate the EPA 2015 Final Rule on the Disposal of Coal Combustion Regulations (EPA Rule).

Please address the following items.

Groundwater Monitoring Well Network

1. In the Groundwater Monitoring Plan (GMP) it is stated that some of the groundwater monitoring wells will be screened from the invert elevation of the adjoining toe drain (where it intersects the water table) to approximately 10 feet below the invert elevation. Since metals sampling results can be affected by complex solution/dissolution reactions that take place in the capillary fringe zone, the well screens should be located at least 5 feet below the seasonal low water table such that they are submerged all year long.
2. The MW's proposed for use must be installed such that they will not be submerged during a flood event. During a flood event, water must not be able to enter the well bore at any time. Existing wells that have a top of casing elevation less than the elevation of the 100-yr flood will need to be modified.

3. In appendix 1, the facility states that the drilling method for installation of new wells will be air rotary. Since the upper aquifer at the facility is in unconsolidated sediments, the facility should also list hollow stem auger as an additional drilling method.
4. The facility has proposed monitoring wells in the underlying Potomac Aquifer system. Based on the relatively shallow depth of the Petersburg Granite at the facility depicted in the cross-sections and boring logs within the GMP, the facility should install additional wells within the Petersburg Granite to act as an additional deeper monitoring well system. The facility should make a note in the GMP ensuring that the proposed up-gradient wells are screened in the same lithologic unit as the down-gradient wells and that the proposed up-gradient wells are located on land owned by Dominion.
5. Groundwater monitoring wells near the toe drain pump stations should be considered.
6. Drawing 2 depicts some of the proposed down-gradient monitoring wells potentially between the toe drain and the waste mass. No groundwater monitoring wells should be located between the toe drain and the waste mass.

Sampling and Analysis

7. It is stated in Section 5.1.2 that the down-gradient wells will be sampled during the background sampling period. Since waste is already in place, sample collection from the down-gradient monitoring wells during development of background is not necessary.
8. Additional VSWMR constituents that are required to be monitored under the Modified Assessment Monitoring program shall include Copper, Cyanide, Nickel, Silver, Vanadium, and Zinc. Please add these constituents to Table 4 of the GMP.
9. Section 7.3 should state that in accordance with 9VAC20-81-250.A.4.i verification samples are to be obtained within the 30-day statistically significant increases (SSI) determination period defined in 9VAC20-81-250.A.4.h.(2).
10. The GMP did not appear to contain any discussion of the process of any 3rd party validation of the lab data as discussed in 9VAC20-81-250.A.4.j. Some facilities simply rely on the laboratory QA/QC procedure as the validation tool. If so, this should be clarified in the text.
11. Section 5.2.3 discusses the use of Alternate Concentration Level (ACL) based Groundwater Protection Standards (GPS). The use of ACL values as GPS is not allowed in the CCR Final Rule and any reference to ACL based GPS should be removed from the GMP.
12. It should be noted in Section 6.9.2 that sample will be reported as totals only. The GMP should also have a statement in Section 6.4 that compliance monitoring samples will not be filtered.

Reporting

13. Sections 5.2.5.7 should state that the facility has 30 days to determine if there is an SSI above GPS per 9VAC-20-81-250.A.4.h.(2) and 14 days to notify the DEQ if an SSI has been determined as required by 9VAC-20-81-250.C.3.e.(3).(a).
14. Drawing 2 should depict the edge of surface water.
15. In Section 5.2.4 it is stated that installation of additional monitoring wells may be necessary if a release above GPS is detected. Due to the close proximity of surface water, alternate methods of plume delineation may need to be considered in the event that a release above GPS is detected.

16. There does not appear to be any discussion of periodic well inspections in the GMP. The Department recommends that a visual field inspection of the groundwater monitoring wells take place at least once every quarter by a designated site representative and a process be established so that repairs (if needed) can be made prior to the upcoming groundwater sampling event.

Please provide the additional information and necessary revisions. Please note that this letter should not be considered a legal opinion or a case decision as defined by the Administrative Process Act, Code of Virginia § 2.2-4000 *et seq.* If there are any questions about this letter, please contact me at (804)-698-4185 or Justin.Williams@deq.virginia.gov.

Respectfully,



Justin L. Williams
Land Protection & Revitalization Division Director

cc: Jason Miller, PRO Regional Land Protection Program Manager
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